

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application No. 10/804,359

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Applicant: Englert et al.

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Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
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DECLARATION UNDER 37 C.F.R. § 1.132 OF
MARK H. ENGLERT

I, Mark H. Englert, hereby declare that:

1. I am one of the co-inventors of the subject matter disclosed and claimed in the subject patent application.
2. My educational background is as follows: I received a B.A. degree in Chemistry from Oberlin College, a Ph.D. in Physical Chemistry from the University of Wisconsin, and an MBA from the Lake Forest Graduate School of Management.
3. The invention recited in the pending claims was not the result of routine optimization of any existing production method. Rather, the invention recited in the pending claims was the result of three years of ongoing research and development involving 147 bench trial experiment series, 84 production trials taking place at two different plants, and costing nearly \$1 million.

4. The continuous method of manufacturing acoustical panel recited in the pending claims was selected from three different approaches that we considered and bench tested. The continuous manufacturing method approach was considered by myself and others to present the greatest challenge because of the difficulty of producing an acoustical core formulation with enough strength to survive a continuous manufacturing line. Indeed, nearly all USG personnel skilled in the art of making gypsum board predicted failure in the ability to produce this board on a gypsum board line. Nonetheless, we decided to pursue this approach despite its great challenges because it had the greatest potential for growth in terms of both product differentiation and cost efficiency.

5. The bench testing was carried out over a period of 3 years. In addition, we pilot tested this approach on a standard gypsum board production line over a 26-month period. The pilot trials were conducted bi-weekly with each trial examining different formulations, product designs and process modifications with the goal of producing a product that was strong enough to survive the continuous manufacturing process and meet the necessary minimum acoustical requirements. There were many, many failures. In most cases, the board product lacked sufficient strength and so would fall through the rollers, crack, fall apart during drying, fail to harden, or crumble during cutting, board transfer, or other board processing steps.

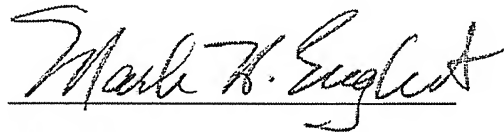
6. To improve strength, we tried several different things including increasing the density of the base layer by decreasing the void volume and adding additional material layers to provide strength. In addition, we made process modifications to the manufacturing line itself including adding additional belts, rollers, smoothing out

vibrations, and adjusting the cutting and drying operations. Our attempts to improve the strength and integrity of the product, however, resulted in a material whose acoustic performance was very poor. Accordingly, we conducted still more trials, in pilot operations and bench tests, and only after approximately 18 months of work did we develop the basis for a new platform technology, as set forth in the subject patent application, and had succeeded where all skilled in the art predicted failure.

7. I hereby declare that all statements made herein of my own knowledge are true, that all statements made on information and belief are believed to be true, that these statements were made with the knowledge that willful false statements and the like so made are punishable to fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date:

10/5/07



Mark H. Englert